Andrew Sameh Greges

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Portfolio LinkedIn GitHub

Personal Information

Languages: Arabic (Native), English (Full Professional Proficiency)

Relocation: Open to relocation globally

Skills

Languages: Python, JavaScript, TypeScript, C, GoLang

Web Development: FastAPI, Django, Flask, Fiber, Echo, React, Next.js, Tailwind, shadcn, Node.js, Bootstrap, Celery, Svelte, Sveltekit, SQL Databases (Postgres, MySQL), No SQL Databases (MongoDB), Redis, Prisma, Sanity, Gunicorn, WebRTC (LiveKit), Payment Gateways (Stripe, Adyen), Restful APIs, micro-services **AI & Data Science:** OpenAI APIs, Langchain, Langgraph, VLLM, Opensource LLMs (LLAMA, Vicuna, Mistral), Whisper (ASR), NumPy, Pandas, Matplotlib, Plotly, Sci-Kit learn, PowerBi, Tableau, Gradio, Streamlit, Huggingface, Pinecone, Vector Databases, Anaconda, PandasAI, LiveKit Agents, ElevenLabs, Deepgram, Agentic AI

DevOps & Deployment: AWS, Azure, Oracle Cloud, Docker, GitHub, Azure DevOps, Datadog, Vercel, Grafana, GitHub Actions, MeileSearch, NGINX, Serverless Functions

Miscellaneous: OOP, APIs, Git, Agile Methodology, Linux, Bash, XML, JSON, Tableau, A/B Testing, NGINX, TestRail, Selenium, Grafana K6, Postman, Jira, Locust, CCNA, Networks, Analog and Digital Electronics, Arduino, Excel

Professional Experience

Valsoft - Aspire Software Software Developer - Dockmaster Software

Remote - Canada | Oct 2022 - Present

Apr 2024 – Present

- Implemented new features and fixed bugs, ensuring the continuous improvement and reliability of the software.
- Maintained server configurations, ensuring optimal performance and availability.
- Attended product meetings to ideate and discuss feature enhancements, contributing to the strategic growth and development of the software.
- Collaborated closely with cross-functional teams to ensure the alignment of development efforts with business goals and user needs.
- Developing prototypes for AI features to be integrated within the software, building robust systems to integrate with our products.

Technologies: Python, Django, FastAPI, AWS, Redis, Datadog, Github, OpenSearch, Bash, Postgres, Django RQ, NGINX, Locust, Grafana K6, Stripe, Adyen, shadcn

AI Backend Developer - Hospitality Portfolio

Oct 2023 - Apr 2024

- Developed prototypes for AI features tailored to the hospitality department, enhancing support and operational efficiency.
- Created a RAG documentation chat for the support team, streamlining access to information and reducing response times.
- Implemented automated ticket first replies with suggested solutions, improving customer service efficiency and response accuracy.
- Designed AI-driven BI solutions to generate insights from databases and software APIs, facilitating data-

driven decision-making.

• Developed tools for summarization and classification of backlog tickets, assisting the product team in prioritizing and addressing issues effectively.

Technologies: FastAPI, OpenAI, Pinecone, Serverless Functions, Docker, Langchain, Pandas, Sci-kit learn, Next.js, Gradio, Postgres, PandasAI

API Implementation Engineer - InnQuest

Oct 2022 - Oct 2023

- Created, configured, tested, and deployed Agora API integration functionalities, ensuring seamless connectivity and optimal performance.
- Coordinated the implementation of third-party systems connections with active system monitoring, ensuring reliable and efficient integrations.
- Developed multiple automation tools to facilitate the search and investigation of issues, significantly improving the efficiency of the troubleshooting process.

Technologies: Postman, TestRail, Selenium, Python, APIs, Pandas

FlairsTech

Maadi - Egypt | Feb 2023 - Dec 2024

AI Fullstack Developer (Consultant)

- Developed AI solutions for the operations department, enhancing efficiency and performance across various tasks.
- Created an AI web application for the quality team, reducing call/ticket evaluation time by up to 80% and achieving a 90% utilization rate for overall call evaluations.
- Led the development and deployment of the web application, handling frontend, backend, AI microservices, server configurations, and deployment.

Technologies: Mistral LLM, Whisper ASR, VLLM, SvelteKit, FastAPI, Docker, Postgres, AWS, GitHub, NGINX, Langchain

Vodafone UK

Cairo - Egypt | Nov 2019 - Oct 2022

Resolution Manager – Mobile Technical Service Line

- Supported service lines across Egypt, India, and the UK, collaborating with multiple stakeholders to achieve commercial targets.
- Managed performance for a team of 17 agents in the Home Broadband service line, ensuring high levels of service quality and efficiency.

Education

Higher Technological Institute

Cairo | Sept 2016 – Sept 2021

Bachelor of Electronics and Communication Engineering

- Overall Grade: Very Good
- Grad Project: Automated Greenhouse Using IoT. (Grade: Excellent)

Courses: ALX - Data Science Track, McKinsey Forward Program, Advanced Data Analysis Nano Degree – Udacity, Professional Web Development Nano Degree – Udacity, Python Data Structures, Programming for Everybody (Getting Started with Python), Machine Learning Foundations: A Case Study Approach, Crash Course on Python – Google, CCNA

Projects

FlowPandas - Microservice (Work)

FlowPandas is an AI BI analyst microservice that allows users to interact with their reports through a chat interface to generate BI insights. The microservice provides text explanations, tables of data, and visualizations. It connects to an API that supplies JSON data for analysis.

Technologies used: Redis Stack, OpenAI GPT-3.5, FastAPI, Pandas, PandasAI, and Langchain.

Quality AI – Fullstack (Work)

A full-stack web application designed to assist quality auditors with auditing support agent calls. The project included audio analysis to check for silence gaps, indicating potential failures. It utilized the open-source ASR model (Whisper) to transcribe calls and performed text analysis to detect inappropriate language. The application summarized calls using the open-source LLM (Mistral) and provided Boolean results on predefined evaluation questions to generate a call score. It also integrated with ticketing systems (Zendesk, TeamSupport) to provide real-time updates about tickets within the app. Additionally, the project involved deploying ASR and LLM models for real-time processing and analysis.

Technologies used: Mistral LLM, Whisper ASR, VLLM, Sveltekit, FastAPI, Docker, Postgres, AWS, GitHub, NGINX, Prisma, Tailwind.

AI Support Helper – Microservice (Work)

AI Support Helper is a microservice integrated with the TeamSupport ticketing system to track new tickets created by clients. It generates possible fixes for tickets and provides outage notifications if a matching outage article is found. The microservice searches for ticket information in a vector database that is updated periodically to ensure its knowledge remains current.

Technologies used: OpenAI, TeamSupport API, MySQL, Pinecone, FastAPI, Docker, AWS, Langchain.

DocChat – Microservice (Work)

DocChat is a Retrieval-Augmented Generation (RAG) microservice that enables users to interact with documentation. It keeps track of all the content within PDF pages, including text, page numbers, images, categories, and subcategories. This microservice allows for efficient and accurate information retrieval during chats with documentation.

Technologies used: OpenAI, Pinecone, FastAPI, Docker, AWS S3, Langchain.

Backlog Classifier – Microservice (Work)

Backlog Classifier is a tool designed to organize backlog tickets by classifying them into clusters based on their embeddings. It then generates a title for each cluster using a Large Language Model (LLM), streamlining the management and prioritization of tickets.

Technologies used: OpenAI GPT3.5, OpenAI Ada, FastAPI, PyTorch, Pandas.

Tendering App – Fullstack (Work)

Tendering App is a full-stack application designed to facilitate the tendering process. It allows contractors, consultants, and suppliers to apply to clients' tenders, which can then be managed by software admins. The app includes an admin page to control all aspects of the application, ensuring efficient and streamlined tender management.

Technologies used: Next.js, Postgres, AWS S3, Prisma, Tailwind, shadon.

AI Voice Assistant - Fullstack

The Voice Assistant Project is a full-stack application designed to facilitate seamless customer interactions through voice commands. It leverages WebRTC to handle reservations, communicate with external APIs for information retrieval, and interact with the backend to manage reservations, including submissions, inquiries, and cancellations. Additionally, the project features a second voice assistant based on Retrieval-Augmented Generation (RAG), allowing users to upload PDF or DOCX files and engage in voice-based conversations to query the document's content.

Technologies used: Next.js, FastAPI, LiveKit Agents, Deepgram, OpenAI, Pinecone, Postgres, Langchain